

ABSTRACT OF THE DISCLOSURE

A methanol reforming catalyst that generates a reformed gas containing hydrogen by reforming methanol under the presence of oxygen and steam, comprises a catalytic component I containing Cu oxide and Zn oxide, and a
5 catalytic component II containing metal oxide and one of Pt and Pd. Also, another methanol reforming catalyst comprises a catalytic component I containing Cu oxide and Zn oxide, a catalytic component IIA containing first metal oxide and a noble metal, and a catalytic component IIB containing second metal oxide and one of Pt and Pd. The second metal oxide forms an alloy more easily than
10 the first metal oxide. The auto-thermal reforming process can be stably accelerated in the methanol reforming reaction using these catalysts. Also, there are provided a reformer, a reforming apparatus, and a fuel cell system employing these methanol catalysts. Since a heater or a reducing apparatus can be omitted in these apparatuses, etc., sizes of these apparatuses, etc. become small and thus
15 these apparatuses, etc. are suitable for the installing into the mobile body.